Consolidated Health Informatics

Standards Adoption Recommendation

Population Health

Index

Summary

Domain: Population Health

Standards Adoption Recommendation:
NONE

SCOPE
To enumerate code sets used to report data to public health and for the purpose of population health statistics that were not specifically defined in other CHI domain reports.

RECOMMENDATION
None, additional work identified for CHI Phase II.

The diversity of terminology needs found in the workgroup's investigation of population health reporting needs lead to the conclusion that a specific CHI recommendation is inappropriate at this time.

The workgroup noted that in some circumstances, population health data is identical to clinical data such as reporting of infectious disease cases to public health departments or cancer rapid case ascertainment and other disease registry information to appropriate state registries. In those cases, the appropriate CHI domain recommendations for the underlying clinical data can be used. An example of this use is the Public Health Information Network (PHIN) electronic laboratory reporting standards from CDC that use LOINC® and SNOMED® codes within an HL7® message for public health reporting of infectious organisms identified by laboratories.

OWNERSHIP
-NA-

APPROVALS AND ACCREDITATIONS
-NA-

ACQUISITION AND COST
-NA-

Part I – Team & Domain Scope Identification

Target Vocabulary Domain

Common name used to describe the clinical/medical domain or messaging standard requirement that has been examined.

Population Health

Describe the specific purpose/primary use of this standard in the federal health care sector (100 words or less)

To enumerate code sets used to report data to public health and for the purpose of population health statistics that were not specifically defined in other CHI domain reports.

Sub-domains *Identify/dissect the domain into sub-domains, if any. For each, indicate if standards recommendations are or are not included in the scope of this recommendation.*

Domain/Sub-domain	In-Scope (Y/N)
Public Health Reporting	Y
Population Health Statistics	Y
Billing Data/Statistics	N
Institution Health Statistics	Y/N*

* The Workgroup recommends that institutions keep local statistics using the same codes as required for reporting, but chooses to defer actual operation to the local level.

Information Exchange Requirements (IERs) *Using the table at appendix A, list the IERs involved when using this vocabulary.*

Body of Health Services Knowledge
Case Management Information
Clinical Guidelines
Customer Demographic Data
Customer Health Care Information
Customer Risk Factors
Encounter (Administrative) Data
Improvement Strategy
Labor Productivity Information
Health Organization Direction
Patient Satisfaction Information
Population Member Health Data

Population Risk Reduction Plan
Provider Demographics
Provider Metrics
Resource Availability
Tailored Education Information

Team Members *Team members' names and agency names with phone numbers.*

Name	Agency/Department
Steven J Steindel, PhD (Team Lead)	**CDC/IRMO/HHS**
Theresa Cullen, MD	IHS/HHS
Marjorie S Greenberg	CDC/NCHS/HHS
Victoria A Hampshire	FDA
Michael Lanzilotta	CDC/NCCDPHP/HHS
Joel Levine	HRSA
Nancy Orvis	DoD
Ali Rashidee	AHRQ
Bill Robinson	HRSA
Jian Le (Kevin) Ma	HRSA
Saeed Hamden	CDC/NCCDPHP/HHS

Work Period *Dates work began/ended.*

Start	End
10/24/03	01/27/04

Part II – Standards Adoption Recommendation

Recommendation *Identify the solution recommended*

None

Ownership Structure *Describe who "owns" the standard, how it is managed and controlled.*

NA

Summary Basis for Recommendation *Summarize the team's basis for making the recommendation (300 words or less).*

NA

Conditional Recommendation *If this is a conditional recommendation, describe conditions upon which the recommendation is predicated.*

The diversity of terminology needs found in the workgroup's investigation of population health reporting needs lead to the conclusion that a specific CHI recommendation is inappropriate at this time.

Population Health Reporting is in a world of change. When the CHI Population Health reporting workgroup was first conceived, it was felt that a large number of solutions exist and it would be difficult to make recommendations. With this as a consideration, CHI postponed the start of the workgroup until some domains that this domain might depend on reported. It was hoped that the recommendations from those domains could be used directly for population health reporting.

As these groups reported, the issue did not become clear, but more complex. As expected, the domains reported acceptable solutions to terminology used to report clinical information. In some circumstances, population health data is identical to clinical data such as reporting of infectious disease cases to public health departments or cancer rapid case ascertainment and other disease registry information to appropriate state registries. In those cases, the appropriate CHI domain recommendations for the underlying clinical data can be used. An example of this use is the Public Health Information Network (PHIN) electronic laboratory reporting standards from CDC that use LOINC® and SNOMED® codes within an HL7® message for public health reporting of infectious organisms identified by laboratories.

Much of population health reporting is derived from clinical information, but is not strictly that information. Population health tends to use classification systems that group clinical information. From the grouped information we derive present and longitudinal pictures of public health. An issue that has become more relevant as the CHI moves forward is the complex relationship between these classification systems and clinical data. In many cases, there might be a one-to-one relationship between a clinical condition and the corresponding classification code. In other cases that relationship might be quite complex and rely on multiple pieces of clinical information. Examples of this are the ICD codes for diabetes complicated by pregnancy. To determine the correct code from the set

you need to know if the person has diabetes, is pregnant and what the actual qualifying information is to decide the code. At this time, we do not have the needed experience with either the underlying clinical codes or the rule based mapping systems needed to routinely, as opposed to experimentally, define this process. Lastly, we do not know if the rule based mapping system will provide satisfactory longitudinal data.

The workgroup investigated the present world of population health reporting by asking the public health agencies involved with the workgroup to:

1. Prepare a list of population health data collected, including purpose, at all levels;
2. Note the terminologies/classification systems used to collect that data; and
3. Relate those aspects, if any, of a clinical event that relates to the population health data in item 1.

The items defined by 1 would be the domain. Those defined by 2 could be workgroup recommendations. Item 3 could be used to develop recommendations for the next phase of CHI and hopefully provide some insights on the relationship of clinical to population health data. While our group constitutes a broad cross section of public health, we note that our time was short and that the list enumerated for item one is incomplete. We have attached the list as an appendix to this report. Found on that list are some recent population health reporting systems used within HHS that use one or more standard terminologies. Not found on that list are the HHS population health reporting systems that do not use any standard terminologies. For example, the National Ambulatory Medical Care Survey appears on the list as it uses ICD-9-CM as an underlying code system. The National Notifiable Disease Surveillance System is not on the list because it currently uses internal codes though it is in the investigative stages of converting to standard terminologies.

Reviewing the appendicle material, we observe that Population Health Reporting needs to cover a wide range of domains and currently use few standard terminologies while many systems use locally developed codesets. Of those codesets that are in common usage, none currently are domain recommendations of CHI. Several have been mentioned as terminologies to which the recommended domain terminology requires mapping. Some are HIPAA approved codesets. Some are required by regulation or international agreement. Hence, because of this diversity, the workgroup feels a specific CHI recommendation for population health reporting is inappropriate at this time.

The Workgroup makes two specific recommendations of CHI to be conducted in a later phase:

1. The terminology systems and uses noted in the appendix are incomplete. Before specific recommendations can be made, a complete understanding of the scope of systems is required. As the nation's health statistics agency, it is recommended that CHI support funding for NCHS to develop this complete list. As part of this task, NCHS should be asked to note areas in which population health reporting requires aggregated data outside of the CHI domains involving clinical data such as occupations, industries and socio-economic data and suggest standard means to

address these aggregation issues.

2. Other CHI domain terminologies have specific clinical uses. It is hoped by many that these clinical terminologies can be used for population reporting. It is how they are to be used that is unknown. It is recommended that an appropriate body be asked to develop a report on the use of clinical data for population health reporting and to include in that report recommendations on the incorporation of past, present and future data as they might represent different population health concepts. The report should focus in part on the following:
    - The extent to which mapping between two terminologies can satisfy multiple needs, including population health reporting;
    - A description of the forms and complexity of the maps;
    - Ability of mapped clinical data to relate to longitudinal data; and
    - The problem of using a dual system where part of population health data is derived from computer mapped clinical data to a reporting terminology and part reported as now using human interpretation to the reporting terminology needs enumeration.

It is anticipated that the NCVHS, the Board of Scientific Counselors of the NCHS and The National Library of Medicine would participate in these studies.

Approvals & Accreditations

Indicate the status of various accreditations and approvals:

Approvals & Accreditations	Yes/Approved	Applied	Not Approved

Options Considered *Inventory solution options considered and summarize the basis for not recommending the alternative(s). SNOMED CT® must be specifically discussed.*

SNOMED CT®
LOINC®
ICD Series of classifications
MedDRA®
Multiple others
(See Gaps for comments)

Current Deployment

Summarize the degree of market penetration today; i.e., where is this solution installed today?

NA

Part III – Adoption & Deployment Information

Provide all information gathered in the course of making the recommendation that may assist with adoption of the standard in the federal health care sector. This information will support the work of an implementation team.

Existing Need & Use Environment

Measure the need for this standard and the extent of existing exchange among federal users. Provide information regarding federal departments and agencies use or non-use of this health information in paper or electronic form, summarize their primary reason for using the information, and indicate if they exchange the information internally or externally with other federal or non-federal entities.

Column A: Agency or Department Identity (name)
Column B: Use data in this domain today? (Y or N)
Column C: Is use of data a core mission requirement? (Y or N)
Column D: Exchange with others in federal sector now? (Y or N)
Column E: Currently exchange paper or electronic (P, E, B (both), N/Ap)
Column F: Name of paper/electronic vocabulary, if any (name)
Column G: Basis/purposes for data use (research, patient care, benefits)

Department/Agency	B	C	D	E	F	G
Department of Veterans Affairs						
Department of Defense						
HHS Office of the Secretary						
Administration for Children and Families (ACF)						
Administration on Aging (AOA)						
Agency for Healthcare Research and Quality (AHRQ)						
Agency for Toxic Substances and Disease Registry (ATSDR)						
Centers for Disease Control and Prevention (CDC)						
Centers for Medicare and Medicaid						

Services (CMS)						
Food and Drug Administration (FDA)						
Health Resources and Services Administration (HRSA)						
Indian Health Service (IHS)						
National Institutes of Health (NIH)						
Substance Abuse and Mental Health Services Administration (SAMHSA)						
Social Security Administration						
Department of Agriculture						
State Department						
US Agency for International Development						
Justice Department						
Treasury Department						
Department of Education						
General Services Administration						
Environmental Protection Agency						
Department of Housing & Urban Development						
Department of Transportation						
Homeland Security						

Number of Terms

Quantify the number of vocabulary terms, range of terms or other order of magnitude.
NA

How often are terms updated?

NA

Range of Coverage

Within the recommended vocabulary, what portions of the standard are complete and can be implemented now? (300 words or less)

NA

Acquisition: *How are the data sets/codes acquired and use licensed?*

NA

Cost

What is the direct cost to obtain permission to use the data sets/codes? (licensure, acquisition, other external data sets required, training and education, updates and maintenance, etc.)

NA

Systems Requirements

Is the standard associated with or limited to a specific hardware or software technology or other protocol?

NA

Guidance: *What public domain and implementation and user guides, implementation tools or other assistance is available and are they approved by the SDO?*

NA

Maintenance: *How do you coordinate inclusion and maintenance with the standards developer/owners?*
NA

What is the average time between versions?
NA

How are local extensions, beyond the scope of the standard, supported if at all?
NA

Customization: *Describe known implementations that have been achieved without user customization, if any.*
NA

If user customization is needed or desirable, how is this achieved? (e.g, optional fields, interface engines, etc.)

NA

Mapping Requirements

Describe the extent to which user agencies will likely need to perform mapping from internal codes to this standard.

See Conditional Recommendation.

Identify the tools available to user agencies to automate or otherwise simplify mapping from existing codes to this standard.

Not yet developed or verified.

Compatibility

Identify the extent of off-the-shelf conformity with other standards and requirements:

Conformity with other Standards	Yes (100%)	No (0%)	Yes with exception

Implementation Timeframe

Estimate the number of months required to deploy this standard; identify unique considerations that will impact deployment schedules.

If some data sets/code sets are under development, what are the projected dates of completion/deployment?

The Workgroup feels that the study of the use of clinical data for population health reporting should start now. Widespread use of clinical data, however, for population health reporting will require widespread use of clinical data systems, further understanding of the relationship between clinical and population health data and in many cases regulatory change. It is estimated that test systems could start within two years, but full implementation would take five to ten years within federal health care systems and perhaps longer in the private sector where clinical data systems are less widely used.

Gaps

Identify the gaps in data, vocabulary or interoperability.

At this time the relationship between clinical data and population health data is a research issue and should be pursued, as noted under the Conditional Recommendations, as such.

Obstacles

What obstacles, if any, have slowed penetration of this standard? (technical, financial, and/or cultural)?

See “Implementation Timeframe” above.

Appendix A

Information Exchange Requirements (IERs)

Information Exchange Requirement	Description of IER
Beneficiary Financial / Demographic Data	Beneficiary financial and demographic data used to support enrollment and eligibility into a Health Insurance Program.
Beneficiary Inquiry Information	Information relating to the inquiries made by beneficiaries as they relate to their interaction with the health organization.
Beneficiary Tracking Information	Information relating to the physical movement or potential movement of patients, beneficiaries, or active duty personnel due to changes in level of care or deployment, etc.
Body of Health Services Knowledge	Federal, state, professional association, or local policies and guidance regarding health services or any other health care information accessible to health care providers through research, journals, medical texts, on-line health care data bases, consultations, and provider expertise. This may include: (1) utilization management standards that monitor health care services and resources used in the delivery of health care to a customer; (2) case management guidelines; (3) clinical protocols based on forensic requirements; (4) clinical pathway guidelines; (5) uniform patient placement criteria, which are used to determine the level of risk for a customer and the level of mental disorders (6) standards set by health care oversight bodies such as the Joint Commission for Accreditation of Health Care Organizations (JCAHO) and Health Plan Employer Data and Information Set (HEDIS); (7) credentialing criteria; (8) privacy act standards; (9) Freedom of Information Act guidelines; and (10) the estimated time needed to perform health care procedures and services.
Care Management Information	Specific clinical information used to record and identify the stratification of Beneficiaries as they are assigned to varying levels of care.
Case Management Information	Specific clinical information used to record and manage the occurrences of high-risk level assignments of patients in the health delivery organization..
Clinical Guidelines	Treatment, screening, and clinical management guidelines used by clinicians in the decision-making processes for providing care and treatment of the beneficiary/patient.

Information Exchange Requirement	Description of IER
Cost Accounting Information	All clinical and financial data collected for use in the calculation and assignment of costs in the health organization .
Customer Approved Care Plan	The plan of care (or set of intervention options) mutually selected by the provider and the customer (or responsible person).
Customer Demographic Data	Facts about the beneficiary population such as address, phone number, occupation, sex, age, race, mother's maiden name and SSN, father's name, and unit to which Service members are assigned
Customer Health Care Information	All information about customer health data, customer care information, and customer demographic data, and customer insurance information. Selected information is provided to both external and internal customers contingent upon confidentiality restrictions. Information provided includes immunization certifications and reports, birth information, and customer medical and dental readiness status
Customer Risk Factors	Factors in the environment or chemical, psychological, physiological, or genetic elements thought to predispose an individual to the development of a disease or injury. Includes occupational and lifestyle risk factors and risk of acquiring a disease due to travel to certain regions.
Encounter (Administrative) Data	Administrative and Financial data that is collected on patients as they move through the healthcare continuum. This information is largely used for administrative and financial activities such as reporting and billing.
Improvement Strategy	Approach for advancing or changing for the better the business rules or business functions of the health organization. Includes strategies for improving health organization employee performance (including training requirements), utilization management, workplace safety, and customer satisfaction.
Labor Productivity Information	Financial and clinical (acuity, etc.) data used to calculate and measure labor productivity of the workforce supporting the health organization.
health organization Direction	Goals, objectives, strategies, policies, plans, programs, and projects that control and direct health organization business function, including (1) direction derived from DoD policy and guidance and laws and regulations; and (2) health promotion programs.

formation Exchange Requirement	Description of IER
Patient Satisfaction Information	Survey data gathered from beneficiaries that receive services from providers that the health organization wishes to use to measure satisfaction.
Patient Schedule	Scheduled procedure type, location, and date of service information related to scheduled interactions with the patient.
Population Member Health Data	Facts about the current and historical health conditions of the members of an organization. (Individuals' health data are grouped by the employing organization, with the expectation that the organization's operations pose similar health risks to all the organization's members.)
Population Risk Reduction Plan	Sets of actions proposed to an organization commander for his/her selection to reduce the effect of health risks on the organization's mission effectiveness and member health status. The proposed actions include: (1) resources required to carry out the actions, (2) expected mission impact, and (3) member's health status with and without the actions.
Provider Demographics	Specific demographic information relating to both internal and external providers associated with the health organization including location, credentialing, services, ratings, etc.
Provider Metrics	Key indicators that are used to measure performance of providers (internal and external) associated with the health organization.
Referral Information	Specific clinical and financial information necessary to refer beneficiaries to the appropriate services and level of care.
Resource Availability	The accessibility of all people, equipment, supplies, facilities, and automated systems needed to execute business activities.
Tailored Education Information	Approved TRICARE program education information / materials customized for distribution to existing beneficiaries to provide information on their selected health plan. Can also include risk factors, diseases, individual health care instructions, and driving instructions.

Appendix:
Limited Summary of Current Population Health Reporting Systems Using Standard Terminology Maintained by HHS Agencies

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
COSTART	Vaccine Adverse Event Reporting System (VAERS)					None	
CPT-4®	Minimum Data Elements (National Breast/Cervical Cancer Early Detection - MDE)				Yes	None	Procedure
CPT-4®	Vaccine Safety Datalink Project (VSD)				Yes	None	Procedure
CPT-4®	Uniform Data System (UDS) for the Consolidated Health Center Program-HRSA Bureau of Primary Health Care				Yes	Section 330(e), 330(h) PHS Act,	Detection and Treatment and availability of health care services
CPT-4®	Health Cost and Utilization Project (HCUP)				Yes	None	Procedures
CPT-4®	Medical Expenditure Panel Survey (MEPS)				Yes	None	Procedures

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
CPT-4®	IHS – monitoring care		latest	As released	Yes	Yes	Procedures
DRG	Medical Expenditure Panel Survey (MEPS)					None	Diagnoses and inpatient procedures
DSM IV	Medical Expenditure Panel Survey (MEPS)				?	None	Diagnoses
DSM-IV	Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP)				?	None	Procedure
Eindhoven Classification-Medical Model	National Patient Safety Network Itself				?	?	
HCPCS	Health Cost and Utilization Project (HCUP)					None	Procedures
HCPCS	Grantee Researchers using CMS data					None	Procedures
HL7® controlled terminology	National Patient Safety Network Itself					None	
HL7® vaccine list	Vaccine Adverse Event Reporting System (VAERS) - FDA and CDC					None	
ICD-10	122 Cities Mortality Reporting System (122 MRS)					None	Morality

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
ICD-10	Medical Examiner/Corner Information Sharing Program (MECISP)					None	Morality
ICD-10	Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP)					None	Morality
ICD-10	National Mortality Follow-back Survey (NMFS)					None	Morality
ICD-10	National Vital Statistics System (NVSS)					None	Morality
ICD-10	National Vital Statistics System - Fetal Death (NVSS)					None	Morality
ICD-10	National Vital Statistics System - Linked Birth/Infant Death (NVSS)					None	Morality
ICD-10	National Vital Statistics System - Mortality (NVSS)					None	Morality
ICD-10	National Vital Statistics System - Natality (NVSS)					None	Morality
ICD-10	Adult Spectrum (HIV) of Disease (ASD)					None	Morality

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
ICD-10	HIV/AIDS Reporting System (HARS)					None	Morality
ICD-10	Pediatric Spectrum (HIV) of Disease (PSD)					None	Morality
ICD-10	National Nosocomial Infectious Surveillance System (NNIS)					None	Morality
ICD-10	Central Nervous System Injury Surveillance System (CNSISS)					None	Morality
ICD-10	National Occupational Mortality Surveillance System (NOMS)					None	Morality
ICD-10	National Surveillance System for Pneumoconiosis Mortality (NSSPM)					None	Morality
ICD-10	National Traumatic Occupational Fatalities Surveillance System (NTOF)					None	Morality
ICD-10	Vaccine Safety Datalink Project (VSD)					None	Morality

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
ICD-10 for Health-related Injury Code and/or modify the E Codes in ICD-9 for iatrogenic injuries	National Patient Safety Network Itself					None	
ICD-9	Title V Information System - HRSA Maternal and Child Health Bureau			Annual		None	Improved health outcomes and needs assessment
ICD-9 CM	Health Cost and Utilization Project (HCUP)					None	Diagnoses
ICD-9 CM	Medical Expenditure Panel Survey (MEPS)					None	Diagnoses
ICD-9-CM	National Exposure Registry (NER)					None	Diagnosis
ICD-9-CM	Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP)					None	Diagnosis
ICD-9-CM	Longitudinal Follow-up to the National Maternal and Infant Health Study (LFNMIHS)					None	Diagnosis
ICD-9-CM	National Ambulatory Medical Care Survey (NAMCS)					None	Diagnosis

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
ICD-9-CM	National Home and Hospice Care Survey (NHHCS)					None	Diagnosis
ICD-9-CM	National Hospital Ambulatory Medical Care Survey (NHAMCS)					None	Diagnosis
ICD-9-CM	National Hospital Discharge Survey (NHDS)					None	Diagnosis
ICD-9-CM	National Nursing Home Survey (NNHS)					None	Diagnosis
ICD-9-CM	National Survey of Ambulatory Surgery (NSAS)					None	Diagnosis
ICD-9-CM	National Mortality Follow-back Survey (NMFS)					None	Diagnosis
ICD-9-CM	Second Longitudinal Study on Aging (LSOA II)					None	Diagnosis
ICD-9-CM	HIV/AIDS Reporting System (HARS)					None	Diagnosis
ICD-9-CM	Hemophilia Surveillance System (HSS)					None	Diagnosis
ICD-9-CM	Streptococcus Pneumoniae and Haemophilus Influenzae					None	Diagnosis

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
ICD-9-CM	Central Nervous System Injury Surveillance System (CNSISS)					None	Diagnosis
ICD-9-CM	State-Based Emergency Department Injury Surveillance					None	Diagnosis
ICD-9-CM	Fatality Assessment and Control Evaluation (FACE)					None	Diagnosis
ICD-9-CM	National Coal Workers' Autopsy Study (NCWAS)					None	Diagnosis
ICD-9-CM	Vaccine Safety Datalink Project (VSD)					None	Diagnosis
ICD-9-CM	Uniform Data System (UDS) for the Consolidated Health Center Program-HRSA Bureau of Primary Health Care	1966	2nd	Annual		Section 330(e), 330(h) PHS Act,	Detection and Treatment and availability of health care services
ICD-9-CM	Grantee Researchers using CMS data					None	Diagnosis
ICD-9-CM	IHS – for reporting, monitoring care	Long term	Latest	As released		Yes	Diagnosis

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
ILD Classification	Coal Workers' X-ray Surveillance Program (CWXSP)					None	
Internally developed, considering incorporation within LOINC®	Blood Product Deviations (BPD) - FDA					Yes	
Internally developed, considering incorporation within LOINC®	BPD-Fatalities					Yes	
LOINC®	Minimum Data Elements (National Breast/Cervical Cancer Early Detection - MDE)					None	
LOINC®	National Healthcare Safety Network (NHSN)					?	
LOINC®	National Patient Safety Network Itself					?	
LOINC®	IHS- monitoring care	2002	Latest	As released		None	Test Names
MedDRA®	Vaccine Adverse Event Reporting System (VAERS) - FDA and CDC					None	
MedDRA®, and SNOMED CT®	Adverse Event Reporting System (AERS) - FDA					Yes	

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
MedDRA®, Patient problem list, Device Problem list, Device list (known as standard product nomenclature in UMLS®)	Manufacturer and User Facility Experience					Yes	
NAACCR (http://www.naaccr.org/filesystem/pdf/VolumeII10.1FINALPDF5-30-03.pdf)	Cancer Registration including the National Program of Cancer Registries (NPCR) at CDC, the Surveillance Epidemiology and End Results (SEER) at NIH and the American College of Surgeons Commission on Cancer	1995*	10.1**	Annually	0	PA 02060	Typically, a registrar in a hospital abstracts the best available data from the medical record and submits that data to the central cancer registry (CCR). The CCR consolidates the information for the cancer from the multiple hospital sources.
NDC	Medical Expenditure Panel Survey (MEPS)					None	Drugs

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship
RxNORM	National Patient Safety Network Itself					None	
SNOMED®	Minimum Data Elements (National Breast/Cervical Cancer Early Detection - MDE)					None	
SNOMED CT	National Healthcare Safety Network (NHSN)					None	
SNOMED CT®	National Patient Safety Network Itself					None	
SNOMED CT®	Vaccine Adverse Event Reporting System (VAERS) - FDA and CDC					None	
Units	Childhood Blood-Lead Poisoning Surveillance System (CBLS)					None	
VAERS vaccine list	Vaccine Adverse Event Reporting System (VAERS) - FDA and CDC					None	

Terminology	Population Health Use	First Used	Version	Update Frequency	Fee	Regulatory Requirement	Clinical Relationship

Note: CDC Systems based on 1998 report that has not been updated. Conversion of CDC Surveillance systems to national codes, particularly LOINC® and SNOMED® is well underway and not reflected in this table